

What is claimed is:

1. A one-way valve assembly for a fuel tank filler neck comprising:
  - (a) a tubular shell having a valve seating surface formed about one end thereof and having a reduced exterior diameter portion on the end opposite said one end and adapted for insertion in the end of an existing filler neck and having a recess formed therein adjacent said one end;
  - (b) a moveable valve member hingedly disposed for movement with respect to said one end of said tubular shell;
  - (c) a spring disposed to have one end thereof contacting said recess in said shell and having the end opposite said one end secured to said valve member, wherein said spring is operative to bias and maintain said valve member into contact with said valve seating surface; and,
  - (d) a flexible annular seal disposed to seal between said valve member and said valve seating surface.
2. The assembly defined in claim 1 wherein said valve member is mounted on said spring for limited lost motion for self alignment with said valve seating surface.
3. The assembly defined in claim 1 wherein said annular seal is attached to said valve member for movement therewith.

**01-ASD-226 (GT)**

4. The assembly defined in claim 1, wherein said spring comprises a torsion spring with coil portion thereof received in a slot formed on the tubular member.
5. The assembly defined in claim 4 wherein said slot is sized to permit limited transverse movement of said coils with respect thereto.
6. The assembly defined in claim 1 wherein said tubular shell and said valve member are formed of plastic material and said annular seal is formed of elastomeric material.
7. The assembly defined in claim 6 wherein said plastic material is interspersed with electrically conductive material for facilitating discharge of accumulated static electrical charge.
8. The assembly defined in claim 1 wherein said valve member attached to said tubular shell for pivotal movement.
9. The assembly defined in claim 1, wherein said valve member is moveable from a position contacting said valve seating surface to an open position by insertion of a siphon hose through said reduced diameter end of said tubular shell.

10. The assembly defined in claim 1, wherein said spring comprises a torsion spring with at least one coil formed thereon.
11. The assembly defined in claim 1, wherein, said tubular shell has a slot formed thereon with portions of said valve member received therein and permitting axial movement for facilitating seating of said valve member on said opposite end of said tubular shell.
12. The assembly defined in claim 1, wherein said spring has one end thereof contacting said valve member in the center thereof.
13. The assembly defined in claim 12, wherein said valve member has a V-shaped groove with said one end of said spring nested therein for centering said spring contact with said valve member.
14. The assembly defined in claim 1, wherein said valve member includes a pair of arms extending therefrom with end portions thereof pivotally engaging said tubular shell.
15. The assembly defined in claim 1, wherein said tubular member includes an inwardly extending rib for guiding a siphon hose upon insertion therein.

16. The assembly defined in claim 1, wherein said valve member includes a rib extending upwardly therefrom for deflecting a siphon upon insertion therein from said annular seal.

17. A method of installing a filler tube on a metal fuel tank comprising:
- (a) providing a tubular metal filler neck with an annular flange on the outer periphery thereof;
  - (b) inserting a one-way valve on a proximal end of the filler neck and inserting an end of the filler neck distal the proximal end in a proximal end of a flexible tube;
  - (c) inserting a tubular nozzle receiver in an end of the flexible tube distal the proximal end and forming a filler neck subassembly; and,
  - (d) inserting the one-way valve of the subassembly in an access opening in the tank and securing the annular flange of the filler neck about the access opening thereby retaining the subassembly on the tank.
18. The method described in claim 17, wherein said step of securing the annular flange includes weldment.
19. The method described in claim 17, wherein said step of providing a metal filler neck with an annular flange includes forming a convolution.

20. A method of installing a filler tube on a plastic fuel tank comprising:
- (a) providing a tubular plastic member with an annular flange on the outer periphery thereof;
  - (b) inserting a one-way valve in a proximal end of the tubular member;
  - (c) inserting an end of the tubular member distal the proximal end in one end of a flexible filler neck and inserting a tubular nozzle receiver in an end of the filler neck distal the one end and forming a filler tube subassembly; and,
  - (d) inserting the one-way valve of said subassembly in an access opening in the tank and securing the annular flange to the tank about the access opening and retaining the subassembly on the tank.
21. The method defined in claim 20, wherein the step of securing the annular flange to the tank includes weldment.
22. The method defined in claim 20, wherein the step of providing a tubular plastic member with a flange includes molding a one-piece member.